



Office of  
Transportation Technologies

## *Used Cooking Oil Into Clean Biodiesel*

Creating jobs and helping America meet its energy security  
& environmental goals

A city-owned building in a disadvantaged section of Chicago could one day be home to one of the country's first biodiesel production plants, with up to 120 employees working to reclaim millions of gallons of used cooking oil and turn what used to be a costly waste problem into a cost-effective source for a cleaner, American-made transportation fuel.

The effort is a highly diverse, cost-shared partnership that has blossomed from early collaborative R&D

demonstration-level reclamation and production, as well as a "prove out" phase utilizing the biodiesel fuel in regularly operating municipal and commercial buses, and continually collecting information on emissions and operating performance.

*A Multitude of Partners Working Together to Solve a Multitude of Problems.* OTT is charged with helping America reduce its dependence on foreign petroleum and clean up its air by decreasing the levels of pollutants emitted by the petroleum-based transportation



*Secretary Hazel O'Leary presents an Energy Pioneer Award to Mr. Michael Gagliardo (far left), President of Columbus Foods Company of Chicago, shown with his family and an employee.*

efforts between DOE's Office of Transportation Technologies (OTT) and two trade industry partners into an aggressive commercial effort led by private-sector investment. It includes all elements of

sector. To help meet these goals, it has long championed biofuels such as biodiesel, which can be produced from renewable, domestically sourced agricultural materials, and, when blended with conventional

diesel fuels, can significantly reduce emissions of lung-burning soot and carbon monoxide. A main impediment to widespread use of biodiesel is its cost, and a number of OTT programs are geared toward lowering that cost through development of new conversion technologies and inexpensive, renewable feedstocks.

Obviously, the Chicago biodiesel program, based on converting a cheap, plentiful material into useable fuel, is well in line with OTT's goals, but it's also an excellent example of how organizations with sometimes different, but complementary goals can work together in win-win partnerships. If this effort is successful, the City of Chicago will be creating up to 120 new jobs in an area of the city identified as a Federal Enterprise Zone, helping stimulate the local economy. In addition, the city's Transit Authority will get a source of biodiesel, already proven effective in its own local clean air efforts, and difficult to obtain on the open market.

The effort also meets the goals of a host of industry trade association partners, including the National Biodiesel Board, the Fats and Protein Research Foundation and the Illinois Soybean Association, who will further the needs of its members for new markets and innovative operating techniques. But perhaps the most interesting story comes from the effort's front-line partner, Columbus Foods Company, a family-owned, entrepreneurial supplier of fresh cooking oils to restaurants and food manufacturers. Columbus sees the project as a business opportunity potentially enabling them to provide a full-cycle service to their customers. Ultimately, they would plan to buy back the used oil, differentiating their offering by providing their customers with a valuable disposal solution, as well as creating a new profit center with a new commercial product.

*Small Public Investment, Big Potential Payoff.* This effort is also an example of how a relatively small amount of public investment, combined with a visionary idea and good project facilitation, can evolve into a major private-sector project. Columbus Foods is

investing about half-a-million dollars in building the plant, as well as bringing their industry expertise to the partnership. Another private-sector partner, the American Sight-seeing Tours Company, is providing several hundred thousand dollars in funding, putting the fuel to work in its buses, and arranging for the collection and dissemination of emissions and performance testing data. The City of Chicago donated the building for the plant, and, through its Transit Authority, is also investing funds and collecting data from municipal bus operations. Association partners are also investing significant financial and technological resources. Total Federal investment is projected at \$200,000, but OTT's main contribution is providing industry and technical knowledge, to act as a catalyst in bringing the key players together, to educate them on available technologies and help spread the vision of the considerable benefits the creation of an American biodiesel industry has to offer.

*A Pioneering Concept for the Future.* If the Chicago biodiesel project is successful, it could spearhead a new American industry, creating thousands of new jobs in urban areas nationwide, making a substantial dent in America's petroleum dependence and removing millions of tons of respirable particulates and greenhouse gases from our air annually. In order to realize this vision, someone has to take the first step. OTT, through Energy Secretary Hazel O'Leary, recently honored the innovative spirit of several of its partners with The Energy Pioneer Award. Their prudent risks will likely pay off not only for themselves, but for all of America.



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